UNCLASSIFIED

Redacted VERSION

ADWD-141

~~SECRET~~

This document consists of 13 pages.
No. ~~37~~ of ~~42~~ copies. Series A.

LAMD-319

FAMILY COMMITTEE
Minutes of Eleventh Meeting
May 25, 1950

Unique [illegible]

A. Attendance.

The eleventh meeting of the Family Committee was held Thursday, May 25, 1950 at 1:15 PM in Room B-117. Those present were

G. Best	J. C. Mark
J. C. Clark	H. L. Mayer
F. de Hoffmann	N. Metropolis
D. K. Froman	M. Roy
R. W. Goranson	R. F. Taschek
G. K. Hess	J. M. Taub
M. G. Holloway	E. Teller, Chairman
J. M. Keller	F. M. Walters
E. Konopinski	J. A. Wheeler
D. P. MacDougall	

B. Minutes of the Tenth Meeting.

The Committee unanimously adopted the minutes of the Tenth Meeting reported in ADWD-139 with the following corrections:

(1) On page 2, in the penultimate sentence of the first paragraph of item D, change the word "initiator" to read "detonator".

(2) On page 5, on lines 14 through 16, omit the sentence starting [redacted] +0B b(3)

C. [redacted]

DOE

UNCLASSIFIED

-1-

~~SECRET~~

DOE b(3)

DOE b(3)

DOE b(3)

As usual this efficiency calculation involves the variation of alpha as a function of time. Figure 2 shows the variation of alpha as a function of radius of the sphere. Figure 2 also shows the change in the alpha curve if the tamper is finite (assumed 1 mean free path of tube alloy). The same α_0 is obtained and the initial slope is close to the previous one. A separate efficiency calculation for this case has not yet been performed.

DOE b(3)

DOE b(3)

DOE b(3)

DOE b(3)

Doubt was expressed that this figure actually would be as low as calculated. In particular, Holloway cited the result obtained with Yoke as suggesting that the yield would probably be higher.

DOE b(3)

DOE b(3)

Figure 3 shows the variation of energy developed as a function of $\frac{R}{R_o}$ of the equivalent sphere. Since for the purposes of radiation studies we are interested in the internal energy developed, there is also shown a curve showing what fraction of the total energy is due to internal energy. One may also calculate the average temperature $\overline{T}$ in the oralloy as a function of R as indicated on Figure 4.

DOE b(3)

This case is also indicated in Figure 4.

DOE b(3)

Wheeler then reported the requirements attendant upon the temperature of the radiation in order to make the DT go.

DOE b(3)

DOE
b(3)

This sketch is shown in Figure 6 and showe the assembly at the initial stage before firing. It should be emphasized that this drawing is to be taken purely as a sketch and that the dimensions and materials will be fixed upon in the near future so that GMX can perform experiments along the lines of such an assembly.

DOE
b(3)

DOE
b(3)

FIG. 1

DOE
b(3)

UNCLASSIFIED

UNCLASSIFIED

UNCLASSIFIED

UNCLASSIFIED

UNCLASSIFIED

DE
(3)

UNCLASSIFIED

SECRET

UNCLASSIFIED

DOE
b(3)

FIG. 6

UNCLASSIFIED

SECRET